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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,677	12/13/2001	Kenneth L. Levy	P0502	9557

23735 7590 05/25/2005

DIGIMARC CORPORATION  
9405 SW GEMINI DRIVE  
BEAVERTON, OR 97008

EXAMINER
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POLTORAK, PIOTR

ART UNIT	PAPER NUMBER
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2134

DATE MAILED: 05/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/017,677

Applicant(s)

LEVY, KENNETH L.

Examiner

Peter Poltorak

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Claims 1-9 have been examined.

#### ***Drawings***

2. The drawings are objected to because objects 106 and 124 of Fig. 2 and object 308 in Fig. 3 are not addressed in the specification. Also object 224 addressed in reference to Fig. 2 (in the specification) is not found in the figure.
3. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Claim Objections***

4. The second "a digital watermark" in claim 9 should be "the digital watermark".

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 1<sup>2</sup> is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that applicant regards as the invention.
6. Claim 1<sup>2</sup> recites the limitation that "the orientation is random for each instance of embedding the digital watermark". It is not clear whether the "each instance" refers to each instance within a session, in which the watermark is embedded into a content signal or whether the limitation suggests that a watermark orientation should be different for different sessions as well.
7. Claims 2-9 are rejected by the virtue of their dependence.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-8 are rejected under 35 U.S.C. 102(e) as being anticipated by *Venkatesan et al.* (U.S. Patent No. 6801999).

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9. *Venkatesan et al.* embedding a relatively large number,  $n$ , of identical watermarks throughout a single software object, through use of  $n$  different secret watermark keys. Each of these watermark keys defines a starting location (e.g., in time, space or frequency) in a protected object (or, in a general sense, a pointer to a location in that object) at which a corresponding watermark appears (*Venkatesan et al.*, col. 5 lines 22-30). The starting position of each watermark is specified by a corresponding one of  $n$  different watermark keys. Since these keys, as discussed above, are generated on a pseudo-random basis, watermarks are themselves distributed throughout object on a pseudo-random basis (*Venkatesan et al.*, col. 28 lines 57-63).
10. Claims 1-8 are rejected under 35 U.S.C. 102(e) as being anticipated by *Itoh et al.* (U.S. Patent No. 6700989).
11. As per claim 1-2 *Itoh et al.* teach receiving a signal (watermark information) to be embedded in the content signal (original image), embedding the forensic digital watermark signal at the selected orientation in the content signal, wherein the embedding applies a different orientation to the digital forensic watermark for each instance of embedding the forensic digital watermark (Fig. 3-Fig 8 and e.g. col. 7 lines 44-60). The forensic digital watermarks are embedded throughout a software object through use of  $n$  different secret watermark keys (*Abstract*) These keys are created by applying a random value as a "seed" to a conventional cryptographically secure pseudo-random number generator to generate  $n$  pseudo-random numbers,

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where each resulting number will be a different forensic digital watermark key (*col. 27 lines 10-14*).

12. As per claims 3-8 *Itoh et al.* teach watermarks insertion into a plurality of frames selected as desired, in addition to the visible watermark written in a spatial region or into a frequency region in order to intensify the prevention of piracy (*Itoh et al.*, *col. 26 lines 17-25*).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Itoh et al.* (*U.S. Patent No. 6700989*) in view of *Hashimoto* (*U.S. Pub. 20010009581*) and in further view of *Wendt* (*U.S. Pub. 2002/0090109*).

14. *Itoh et al.* teach the forensic digital watermarks as discussed above.

*Itoh et al.* does not explicitly teach attempting to detect a digital watermark in the content signal, and in response to detecting a digital watermark, embedding the forensic digital watermark at an orientation that does not interfere with the digital watermark.

*Hashimoto* teach detecting digital watermark (*first watermark*) in the content signal and teach embedding the forensic digital watermark (*second watermark*)

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(*Hashimoto, Abstract*) and *Wendt* suggests embedding watermarks into pre-existing watermark so that they do not interfere. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to detect a digital watermark in the content signal, and in response to detecting a digital watermark, embedding the forensic digital watermark at an orientation that does not interfere with the digital watermark. One of ordinary skill in the art would have been motivated to perform such a modification in order to prevent the digital watermark degradation.

15. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Venkatesan et al.* (U.S. Patent No. 6801999) in view of *Hashimoto* (U.S. Pub. 20010009581) and in further view of *Wendt* (U.S. Pub. 2002/0090109).

*Hashimoto* teach detecting digital watermark (*first watermark*) in the content signal and teach embedding the forensic digital watermark (*second watermark*)

(*Hashimoto, Abstract*) and *Wendt* suggests embedding watermarks into pre-existing watermark so that they do not interfere. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to detect a digital watermark in the content signal, and in response to detecting a digital watermark, embedding the forensic digital watermark at an orientation that does not interfere with the digital watermark. One of ordinary skill in the art would have been motivated to perform such a modification in order to prevent the digital watermark degradation.

### **Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: *Weirauchi* (JP02004236293A).

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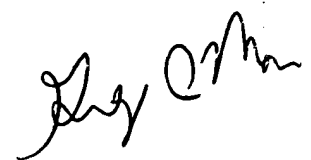
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Poltorak whose telephone number is (571)272-3840. The examiner can normally be reached Monday through Thursday from 9:00 a.m. to 4:00 p.m. and alternate Fridays from 9:00 a.m. to 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse can be reached on (571) 272-3838. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Signature

5/16/05  
Date

  
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SUPERVISORY PATENT EXAMINER  
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